

REMARKS/ARGUMENTS

In the Office Action of November 6, 2003, claims 1 and 3-11 were rejected under 35 USC 103 (a). In view of the amendments above, and the remarks below, reexamination and reconsideration is respectfully requested.

Claim 1, which is directed at a method to reduce noises between adjacent interior vehicle trim parts, has been amended to recite the method of including the steps of: providing first and second trim parts, the first trim part having a peripheral mating edge configured to lie adjacent a peripheral mating edge of the second part when the first and second trim parts are supported adjacent one another and wherein said first and second trim parts are not adhered to one another;

forming a recess having an undercut portion in the peripheral mating edge of the first trim part after providing the first trim part, in which the step of forming a recess includes the steps of:

providing a robot operatively connected to a recess-forming tool; and
operating the robot to move the forming tool into and along the mating edge of the first trim part.

providing buffer material in the recess and overfilling said recess, in which the step of providing buffer material includes the steps of:

providing a robot operatively connected to an applicator;
connecting a source of buffer material to the applicator, the buffer material being in fluid communication with the applicator; and
operating the robot to move the applicator in spaced generally parallel relationship with the peripheral mating edge of the first trim part while projecting buffer material into the recess and onto the mating edge of the first trim part; and

allowing said buffer material to harden so as to provide a bead of buffer material on the peripheral mating edge of the first trim part;

allowing the bead to mechanically lock to the first trim part by hardening of the buffer material within the recess; and

supporting the first and second trim parts adjacent one another with the second trim part contacting the bead of buffer material such that the bead is compressed between the first and second trim parts wherein the buffer material does not adhere to the second trim part.

Support for these changes may be found at page 11 lines 4-9, and page 11 line 25 to page 12 line 9. The claim now recites that the recess is formed by a robot and that the buffer material is applied by a robot. Claim 9 has been amended to depend from claim 1. Claims 7 and 8 have been canceled.

In the Office Action of November 6, 2003, the Examiner made a number of points that Applicants would like to address. Specifically, in paragraph 3 of the Office Action the Examiner wrote that “the admitted prior art teaches assembling interior trim parts in which a first interior vehicle trim part is disposed adjacent a second interior vehicle trim part in which a bead of buffer material/elastomer is provided between the first and second trim parts to reduce noises...”. A point of order. What was admitted to on pages 1-3 was that it was known that some systems applied buffer material in the form of extruded elastomer rather than tape, and that it was difficult to adhere elastomers to all the different materials used to form automotive trim components and panels.¹ In that sense the point was made that adhesion was relied upon for the buffer materials of the prior art,

¹ Specifically, it is written that “[o]ne problem in adapting these systems to use in applying buffer materials to automotive trim is that it is difficult to adhere elastomers to all materials used to form automotive trim components and panels”. See, page 2, lines 5-8 of the specification.

and it is noted that claim 1 recites that the buffer material does not adhere to the second trim part relative to first to the first trim part. In addition, claim 1 also states that the buffer forms a bead in the mating edge of the first trim part and mechanically locks to the first trim part. The Examiner properly recognized on page 3 of the Office Action that indeed, the admitted prior art failed to teach forming a recess having an undercut in the mating surface of the first trim part and providing a buffer material in the recess so as to provide a bead of buffer material on the mating surface and allowing the bead to mechanically lock to the first trim part.

In that sense, it is respectfully submitted that the admitted prior art does not teach or suggest the features of amended claim 1. The admitted prior art emphasized the need for adhesion. This had been obviated and claim 1 recites that the “buffer material does not adhere to the second trim part”. In addition, the prior art fails to teach the use of a recess with an undercut in the mating surface of the first trim part and providing a buffer material in the recess so as to provide a bead of buffer material on the mating surface and allowing the bead to mechanically lock to the first trim part. Accordingly, two features of claim 1 are not disclosed or suggested in the art, and either on its own, and certainly both, would appear to satisfy the conditions for patentability under 35 USC 103.

The Examiner turns to Reid (US 5,810,406) to account for the deficiencies noted above and argues that Reid is combinable “because they are analogous with respect to the desire to form a **stronger bond between mating materials**”.

A key point. Applicant’s claimed invention, as noted, does not rely upon adhesion between the trim parts, in fact, the present invention teaches away and claims beyond the feature of adhesion between the two trim parts so that the parts are easily assembled and disassembled. Further, adhesion between the buffer material and the first

part, which has a recess with an undercut portion in the peripheral mating edge, is not required as the buffer material hardens and simply mechanically locks to the first trim part in the recess.

In that regard, it is respectfully submitted that the basis of the combination of references as advanced by the Examiner, to solve the purported problem of creating stronger bonds, would not lead to the solution provided by the present invention. In fact, stating the argument in the following manner, the Examiner is requested to consider the fact that the pending claim does not recite the requirement of “forming a stronger bond between mating materials”, and actually states otherwise, e.g., “**the buffer material does not adhere to the second trim part**” and “**mechanically locks to the first trim part**”.

Claims 1 and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art Nagao (United States Patent No. 3,635,117) in view of Reid (United States Patent No. 5,810,406).

Nagao is directed at a ring fixing structure for a woodwind musical instrument comprising an elongated hollow body 2 having a groove 9 formed around the circumference of the end portion thereof, a ring 7 fitted around the end portion of the hollow body and having a groove 10 formed around the inside portion of said ring, both of the grooves facing each other, and an **adhesive 11** of hot melt type inserted in and solidified in said **groove** so as to **securely fix** said ring to said hollow body (claim 1). Column 2, line 31 recites “the ring 7 and body 2 are fixedly adhered”. Examining FIG. 2 of the ‘117 reference, it is clear that there is no interlocking of the barrel 2 and upper joint 3, thus the **hot melt adhesive must adhere to both hollow bodies and the ring**. Thus, the reference describes a means for **adhering** parts together (see Abstract) and does not

teach or disclose the use of a **robot to form a recess or to provide buffer material** which adheres to only one of the two trim part surfaces.

Reid (United States Patent No. 5,810,406) is directed at a molding comprising a first **layer** including a surface having a plurality of lugs and recesses and a second **layer extruded** in association with the first layer and generally **forming an adhesive bond between said layers** (see claim 1 of '406).

In contrast, the present invention, as noted above, is directed at providing a first and second **trim part that are not adhered to one another** (thus, the ability to reduce noise caused by contact and relative motion between the two parts), forming a recess in an edge of the first part with a **robot**, overfilling the recess with buffer material applied by a **robot** to form a bead, allowing the buffer material to harden and **mechanically lock** to the first part, and allowing the second trim part to contact and **compress** the buffer material, wherein the **buffer material does not adhere to the second trim part**.

The present invention uses a **hardened buffer material** rather than an **adhesive** as in the cited references to reduce relative movement and absorb vibrations which could cause unwanted noise. Thus, the choice of elastomers as the buffer material as they are not adhesives (e.g. TPO's) but they absorb vibration and may compress easily to reduce relative movement between surfaces or edges (See page 9 lines 5 – 10.). It is preferred in the present invention **not** to secure the first trim part and second trim parts together, as an adhesive bond would, since that would make the parts difficult to disassemble to service any functional parts that they may cover and would more efficiently transfer noise and vibration between parts. Again, the application teaches that the prior art relied upon adhesives (see again page 2, lines 5-14) and the claims distinguish and recite that "the buffer material does not adhere to the second trim part."

Accordingly, neither of the cited references, taken alone or in combination, teach or suggest a first part having a recess, the recess formed by a robot, the recess filled with a buffer material, the buffer material applied by a robot, and an **adjacent second part which contacts and compresses the buffer material, yet does not adhere to it**. Both cited references **claim and definitively rely upon adhesion**.

In Nagao, the hot melt **adheres** to the ring and hollow bodies. In Reid the second layer is adhered to the first layer. The applicant's present invention is **not directed at adhering two parts together** as in Nagao (ring, barrel and upper joint) or Reid (who doesn't even disclose two parts but rather a first layer and second layer) but is directed at **reducing relative movement (and therefore, noise) between adjacent trim panels**.

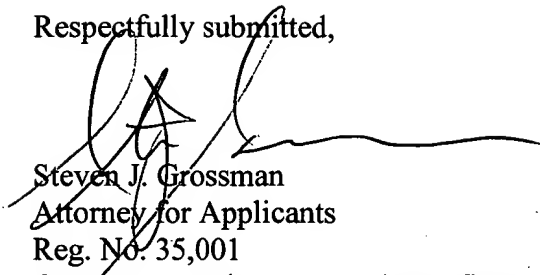
Applicants respectfully again note that the present invention does not read on the bonding of trim parts. Indeed, the present invention is the opposite: it does not bond together trim parts at all. It simply locates a second trim part against a non-adhering buffer material to reduce relative movement and avoid noise. And as noted above, by avoiding the use of an adhesive connection, the trim parts can be readily serviced.

In view of the above, it is respectfully submitted that claims 1, 3-6, and 9-11 are now in condition for allowance. The combined teachings of the art do not suggest the present invention, according to the claims as amended herein, to those of ordinary skill in the art. Allowance at an early date is therefore respectfully submitted.

In the event the Examiner deems personal contact is necessary, please contact the undersigned attorney at (603) 668-6560.

In the event there are any deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 50-2121.

Respectfully submitted,



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